

CLAIMS

1. A locking mechanism for detachably securing a removable dust collection module to a vacuum cleaner housing comprising:

(i) a latch member that can move from a first position in which, in use, it can engage part of the vacuum cleaner housing to a second position in which, in use, it is free from the vacuum cleaner housing; and

(ii) a release member that is movable, in use, relative to the latch member, the movement causing the latch member to move from its first to second position.

2. A locking mechanism according to claim 1, wherein the latch member is an elongate member.

3. A locking mechanism according to claim 2, wherein the elongate latch member comprises a resilient biasing portion that provides a biasing force.

4. A locking mechanism according to claim 3, wherein the latch member also comprises two end housing-engagement portions.

5. A locking mechanism according to claim 4, wherein the end housing-engagement portions are urged away from each other by the biasing force of the resilient portion.

6. A locking mechanism according to claim 3, 4 or 5 wherein the release member can be moved relative to the latch member to provide a force acting against the biasing force of the biasing portion of the latch member.

7. A locking mechanism according to any of claims 1 to 6, wherein the release member is moveable, in use, from a first release-member-position in which it is in contact with the latch member, to a second release-member-position in which it is not in contact with the latch member.

8. A locking mechanism according to claim 7, wherein the release member is movable relative to the latch member such that when the release member is in the said first release-member-position where it is in contact with the latch member then the latch member is in its second position in which it is free from the housing part.

9. A locking mechanism according to any of claims 1 to 8, wherein the release member is provided with at least one cam surface.

10. A locking mechanism according to claim 9 wherein the latch member is provided with a corresponding cam surface

11. A locking mechanism according to claim 9 or 10 wherein the cam surfaces can slide over each other to effect the said movement of the latch member from its first to second position.

12. A locking mechanism according to any of claims 9 to 11, wherein the release member comprises two cam surfaces, and the latch member comprises two end, housing-engagement portions, each of which is provided with a cam surface shaped to correspond with respective ones of the cam surfaces on the release member.

13. A locking mechanism according to any of claims 9 to 12, wherein the or each cam surface on the release member is provided with a bearing, and the or each cam surface of the latch member is provide with a recess shaped to co-operate in a friction fit with the corresponding bearing.

14. A locking mechanism according to any preceding claim, wherein the release member comprises a substantially flat portion.

15. A kit of parts comprising a locking mechanism according to any preceding claim in combination with a removable dust collection module of a vacuum cleaner, the latch member being retained to the dust collection module so that movement of the latch

member relative to the dust collection module in at least one direction is restricted, and preferably substantially prevented.

16. A kit of parts according to claim 15, wherein the latch member of the locking mechanism is at least partly contained within the dust collection module.

17. A kit of parts according to claim 16, wherein the said restriction of movement of the latch member relative to the dust collection module is effected by one or more inwardly directed flanges that project from an inwardly facing surface of the dust collection module.

18. A kit of parts according to any of claims 15 to 17, wherein the release member is a separate part, and is preferably removable, in use, from the vacuum cleaner.

19. A kit of parts according to any of claims 15 to 18, wherein the release member is at least partly contained within the dust bowl.

20. A kit of parts according to any of claims 15 to 19, also comprising a backing plate positioned so as to locate the release member between itself and the dust collection module.

21. A kit of parts according to claim 20, wherein the backing plate is positioned so as to provide a channel in which the release member can slide.

22. A kit of parts according to claim 20 or 21, wherein the backing plate is at least partly contained within the dust collection module.

23. A kit of parts according to any of claims 20 to 22, wherein the latch member is contained within the dust collection module adjacent one surface thereof, and part of the backing plate is positioned substantially to prevent movement of the latch member further into the dust collection module.

24. A kit of parts according to any of claims 15 to 23, wherein the latch member is an elongate member, and the release member is contained within the dust collection module so that it can move relative thereto in a direction that is substantially perpendicular to the said elongate latch member.

25. A kit of parts according to any of claims 15 to 24, wherein the dust collection module comprises an air inlet and the release member also acts as an air inlet closure member, and movement of the release member relative to the latch member also moves the release member relative to the dust collection module and acts simultaneously to close a first air flow path into the dust collection module and open a

second air flow path, that is remote from the first air flow path, into the dust collection module.

26. A kit of parts according to any of claims 15 to 25, wherein the dust collection module comprises two air inlets and the release member also acts as an air inlet closure shuttle member, whereby movement of the release member relative to the latch member causes the release member to slide relative to the dust collection module simultaneously to cover a first of the air inlets of the dust collection module and open a second of the air inlets of the dust collection module or vice versa.

27. A kit of parts according to any of claims 15 to 25, wherein the dust collection module comprises two air inlets and the release member is a shuttle member containing an opening, whereby movement of the release member relative to the latch member causes the release member to move relative to the said air inlets of the dust collection module so that in a first shuttle position the first, but not the second, air inlet of the dust collection module is in register with the shuttle opening, and in a second shuttle position the second, but not the first, air inlet of the dust collection module is in register with the or another shuttle opening.

28. A kit of parts according to claim 27, wherein the shuttle member comprises first and second openings and the closure member can be moved relative to the said air inlets so that in a first shuttle position the first air inlet of the dust collection module is in register with the first shuttle opening but the second air inlet of the dust collection module is not in register with any shuttle opening, and in a second shuttle position the second air inlet of the dust collection module is in register with the second shuttle opening, but the first air inlet of the dust collection module is not in register with any shuttle opening.

29. A vacuum cleaner housing containing the removable dust collection module and locking mechanism combination of any of claims 15 to 28, the dust collection module being removable by extraction from the vacuum cleaner housing in a first direction, and the restricted direction of movement of the locking mechanism relative to the dust collection module also being in the said first direction.

30. A method of detachably securing a removable dust collection module to a vacuum cleaner housing, comprising:

- (i) providing a kit of parts according to any of claims 15 to 28, comprising a dust collection module and a locking mechanism according to any of claims 1 to 14;
- (ii) locating the dust collection module in a vacuum cleaner housing; and
- (ii) moving the release member of the locking mechanism relative to the latch member of the locking mechanism to cause the latch member to move from a first position in which it engages part of the vacuum cleaner housing to a second position in which it is free from the vacuum cleaner housing.

31. A locking mechanism, kit of part, vacuum cleaner housing or method of detachably securing a removable dust collection module to a vacuum cleaner housing substantially as hereinbefore described with reference to the accompanying drawings.